

## II. CLAIM AMENDMENTS

1-101. (Cancelled)

102. (Currently amended) A server for ~~transmitting~~streaming a data signal ~~having a sequence of data units in a predetermined order over a transmission link to a client for streaming playback at the client, the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client, the primary and secondary data units being ordered in the data signal according to an original data unit order, the data units being sent in an order determined by their relative importance rather than their predetermined order~~the server comprising a re-ordering unit for changing the order of primary and secondary data units in the sequence of data units by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

103. (Currently amended) A server according to claim 102, in which the primary data units represent a base layer and the secondary data units represent at least one enhancement layer.

104. (Cancelled)

105. (Previously presented) A server according to claim 102, in which the data signal is scalable.

106. (Previously presented) A server according to claim 105, in which the signal is scalable in a domain selected from the group consisting of the temporal, the spatial, the spectral and the SNR domains.

107. (Previously presented) A server according to claim 102 which comprises an editor for providing the data signal.

108. (Previously presented) A server according to claim 102 in which the data signal represents a sequence of pictures to produce a moving image.

109. (Previously presented) A server according to claim 108 in which the data signal represents a video sequence.

110. (Previously presented) A server according to claim 102 in which the data signal comprises multimedia data.

111. (Currently amended) A data transmission system including a server for transmitting streaming a data signal having a sequence of data units in a predetermined order over a transmission link between from the data source server and to a data sink client for streaming playback at the client, the data units being sent in an order determined by their relative importance rather than their predetermined order the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client, the primary and secondary data units being ordered in the data signal according to an original data unit order, the system comprising a re-ordering unit, for changing the order the primary and secondary data units in the

sequence of data units by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

112. (Cancelled)

113. (Cancelled)

114. (Currently amended) A data transmission system according to claim 111, in which the ~~source is server~~ comprises an editor for providing a scalable data signal.

115. (Cancelled)

116. (Currently amended) A data transmission system according to claim 111, in which the ~~sink~~client is a mobile terminal.

117. (Currently amended) A data transmission system according to claim 111, in which the ~~sink~~client is a mobile telephone.

118. (Currently amended) A data transmission system according to claim 111, in which means are provided to check the progress of transmission and to change the data unit order being used to one better suited to available bandwidth.

119. (Currently amended) A method of ~~transmitting~~streaming a data signal ~~having a sequence of data units in a predetermined order over a transmission link between from a data source server and to a data sink client for streaming playback at the client, the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client, the primary and secondary data units being ordered in the data signal according to an original data unit order, the method comprising the step of sending the data units in an order determined by their relative importance rather than their predetermined order~~ changing the order of primary and secondary data units in the sequence of data units by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

120. (Currently amended) A method of transmitting a data signal according to claim 119, in which the primary and secondary data units are returned to their original ~~sequenced~~data unit order once they have been transmitted over the transmission link.

121. (Currently amended) A method of transmitting a data signal according to claim 119, ~~in which~~comprising checking the progress of transmission is checked and changing the data unit ~~the order being used is changed to one better suited to available bandwidth.~~

122. (Currently amended) A computer program product stored on a computer usable medium comprising:

~~computer readable program means for causing transmission of~~streaming a data signal having a sequence of data units in a predetermined order over a transmission link from a server to a client for streaming playback at a client~~the data units being sent in an order determined by their relative importance rather than their predetermined order~~the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time at the client, the primary and secondary data units being ordered in the data signal according to an original data unit order,

the computer program product further comprising:

computer readable program means for changing the order of primary and secondary data units in the sequence of data units by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

123. (Cancelled)

124. (Previously presented) A computer program product according to claim 122 comprising an editor for providing a scalable data signal.

125. (Cancelled)

126. (Currently amended) A data signal ~~having a sequence of data units for transmission~~streaming over a transmission link between~~from a data source~~server and to

~~a data sink~~client for streaming playback at the client, ~~the data units being in an order determined by their relative importance rather than their predetermined order~~the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time, an order of the primary and secondary data units in the sequence of data units having been changed with respect to an original data unit order by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

127. (Cancelled)

128. (Cancelled)

129. (New) A server according to claim 102, wherein the re-ordering unit is arranged to:

- calculate a buffering time required at the client for full quality streaming playback of the data signal at the client when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a full transmission rate equal to the average bit-rate of the data signal;
- calculate a buffering time required at the client for reduced quality streaming playback of the data signal at the client, when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a reduced transmission rate less than the average bit-rate of the data signal;

- shift the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units, so that where a primary data unit is preceded by a secondary data unit in the sequence of data units, the positions of the primary and secondary data units are exchanged, thereby producing a re-ordered data signal with a modified data unit order different from the original data unit order;
- re-calculate the buffering time required at the client for full quality streaming playback of the data signal assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- re-calculate the buffering time for reduced quality playback of the data signal at the client assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- repeat the step of shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units and the steps of re-calculating the buffering times required for full and reduced quality streaming playback at the client until the buffering time required for full quality streaming playback of the data signal at the client is greater than or equal to the buffering time for reduced quality streaming playback of the data signal at the client.

130. (New) A server according to claim 129, wherein the re-ordering unit is arranged to calculate the buffering time for full quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to the average bit-rate of the data signal;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to played back at its scheduled playback time;

- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

131. (New) A server according to claim 129, wherein the re-ordering unit is arranged to calculate the buffering time for reduced quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to an average bit-rate for the primary data units plus a certain percentage of an average bit-rate for the secondary data units;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to be played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

132. (New) A server according to claim 102, wherein the re-ordering unit is arranged to estimate an expected reduced channel transmission rate in advance.

133. (New) A server according to claim 102, wherein the re-ordering unit is arranged to estimate an expected reduced channel transmission rate based on statistics obtained from the behaviour of the transmission channel.



134. (New) A server according to claim 102, wherein the re-ordering unit is arranged to re-order the data signal to produce re-ordered data signals for several alternative transmission rates.

135. (New) A server according to claim 102, wherein the re-ordering unit is arranged to adjust the sequence of data units dynamically whilst transmission is occurring.

136. (New) A server according to claim 102, wherein the re-ordering unit is further arranged to replace some of the primary data units with secondary data units before changing the order of the primary and secondary data units.

137. (New) A server according to claim 102, wherein the re-ordering unit is arranged to re-order the data units of a data signal for transmission over a transmission channel having a data transmission bandwidth that would otherwise be insufficient for transmitting the data signal.

138. (New) A server according to claim 102, wherein the re-ordering unit is arranged to re-order the data units of a data signal for streaming over a transmission channel so as to make a certain portion of an available bandwidth available for transmission of other data.

139. (New) A server according to claim 102, wherein the data signal is a digital video signal, the primary data units comprise INTRA coded I frames and INTER coded P frames and the secondary data units are bi-directionally predicted B frames.

140. (New) A data transmission system according to claim 111, wherein the re-ordering unit is arranged to re-order the data signal to produce re-ordered data signals for several alternative transmission rates and the data transmission system is arranged to switch to a re-ordered data signal better suited to a lower transmission rate if problems are encountered due to pauses in streaming playback at the client.

141. (New) A data transmission system according to claim 111, wherein the data transmission system is arranged to check the progress of at least one of transmission and playback at the client and the re-ordering unit is arranged to adjust the sequence of data units dynamically whilst transmission is occurring.

142. (New) A method of streaming a data signal according to claim 119, comprising:

- calculating a buffering time required at the client for full quality streaming playback of the data signal at the client when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a full transmission rate equal to the average bit-rate of the data signal;
- calculating a buffering time required at the client for reduced quality streaming playback of the data signal at the client, when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a reduced transmission rate less than the average bit-rate of the data signal;
- shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units, so that where a primary data unit is preceded by a secondary data unit in the sequence of data units, the positions of the primary and secondary data units are exchanged, thereby producing a re-ordered data signal with a modified data unit order different from the original data unit order;

- re-calculating the buffering time required at the client for full quality streaming playback of the data signal assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- re-calculating the buffering time for reduced quality streaming playback of the data signal at the client assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- repeating the step of shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units and the steps of re-calculating the buffering times required for full and reduced quality streaming playback at the client until the buffering time required for full quality streaming playback at the client is greater than or equal to the buffering time for reduced quality streaming playback of the data signal at the client.

143. (New) A method of streaming a data signal according to claim 142, wherein the buffering time for full quality streaming playback of the data signal at the client is calculated by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to the average bit-rate of the data signal;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data to determine whether the first data unit will be received at the client in time to played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

144. (New) A method of streaming a data signal according to claim 142, wherein the buffering time for reduced quality streaming playback of the data signal at the client is calculated by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to an average bit-rate for the primary data units plus a certain percentage of an average bit-rate for the secondary data units;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to be played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

145. (New) A method of streaming a data signal according to claim 119, comprising estimating an expected reduced channel transmission rate in advance.

146. (New) A method of streaming a data signal according to claim 119, comprising estimating an expected reduced channel transmission rate based on statistics obtained from the behaviour of the transmission channel.

147. (New) A method of streaming a data signal according to claim 119, comprising:

- re-ordering the data signal to produce re-ordered data signals for several alternative transmission rates; and

- switching to a re-ordered data signal better suited to a lower transmission rate if problems are encountered due to pauses in streaming playback at the client.

148. (New) A method of streaming a data signal according to claim 119, comprising checking the progress of at least one of transmission and playback at the client and adjusting the sequence of data units dynamically whilst transmission is occurring.

149. (New) A method of streaming a data signal according to claim 119, further comprising replacing some of the primary data units with secondary data units, before changing the order of the primary and secondary data units.

150. (New) A method of streaming a data signal according to claim 119, comprising applying the method to re-order the data units of a data signal for transmission over a transmission channel having a data transmission bandwidth that would otherwise be insufficient for transmitting the data signal.

151. (New) A method of streaming a data signal according to claim 119, comprising applying the method to re-order the data units of a data signal for streaming over a transmission channel, so as to make a certain portion of an available bandwidth available for transmission of other data.

152. (New) A method of streaming a data signal according to claim 119, wherein the data signal is a digital video signal, the primary data units comprise INTRA coded I frames and INTER coded P frames and the secondary data units are bi-directionally predicted B frames.

153. (New) A method of streaming a data signal according to claim 119, wherein the data signal is a scalable data signal having a base layer and at least one enhancement layer.

154. (New) A method of streaming a data signal according to claim 153, wherein the data signal is signal is scalable in a domain selected from a group consisting of the temporal, the spatial, the spectral and the SNR domains.

155. (New) A computer program product according to claim 122, comprising:

- computer readable program means for calculating a buffering time required at the client for full quality streaming playback of the data signal at the client when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a full transmission rate equal to the average bit-rate of the data signal;
- computer readable program means for calculating a buffering time required at the client for reduced quality streaming playback of the data signal at the client, when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a reduced transmission rate less than the average bit-rate of the data signal;
- computer readable program means for shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units, so that where a primary data unit is preceded by a secondary data unit in the sequence of data units, the positions of the primary and secondary data units are exchanged, thereby producing a re-ordered data signal with a modified data unit order different from the original data unit order;
- computer readable program means for re-calculating the buffering time required at the client for full quality streaming playback of the data signal assuming the

data units are streamed over the transmission channel from the server to the client in the modified data unit order;

- computer readable program means for re-calculating the buffering time for reduced quality streaming playback of the data signal at the client assuming the data units are streamed from over the transmission channel from the server to the client in the modified data unit order;
- computer readable program means for repeating the step of shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units and the steps of re-calculating the buffering times required for full and reduced quality streaming playback at the client until the buffering time required for full quality streaming playback at the client is greater than or equal to the buffering time for reduced quality streaming playback of the data signal at the client.

156. (New) A computer program product according to claim 155, further comprising computer readable program means for calculating the buffering time for full quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to the average bit-rate of the data signal;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data to determine whether the first data unit will be received at the client in time to played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

157. (New) A computer program product according to claim 155, further comprising computer readable program means for calculating the buffering time for reduced quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to an average bit-rate for the primary data units plus a certain percentage of an average bit-rate for the secondary data units;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to be played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

158. (New) A computer program product according to claim 122, comprising computer readable program means for estimating an expected reduced channel transmission rate in advance.

159. (New) A computer program product according to claim 122, comprising computer readable program means for estimating an expected reduced channel transmission rate based on statistics obtained from the behavior of the transmission channel.

160. (New) A computer program product according to claim 122, comprising:



- computer readable program means for re-ordering the data signal to produce re-ordered data signals for several alternative transmission rates; and
- computer readable program means for switching to a re-ordered data signal better suited to a lower transmission rate if problems are encountered due to pauses in streaming playback at the client.

161. (New) A computer program product according to claim 122, comprising:

- at least one of computer readable program means for checking the progress of transmission and computer readable program means for checking the progress of playback at the client; and
- computer readable program means for adjusting the sequence of data units dynamically whilst transmission is occurring.

162. (New) A computer program product according to claim 122, further comprising computer readable program means for replacing some of the primary data units with secondary data units, before changing the order of the primary and secondary data units.

163. (New) A computer program product according to claim 122, wherein the computer readable program means for changing the order of the primary and secondary data units is arranged to re-order the data units of a data signal for transmission over a transmission channel having a data transmission bandwidth that would otherwise be insufficient for transmitting the data signal.

164. (New) A computer program product according to claim 122, wherein the computer readable program means for changing the order of the primary and secondary data units is arranged to re-order the data units of a data signal for streaming over a

transmission channel, so as to make a certain portion of an available bandwidth available for transmission of other data.

165. (New) A re-ordering device for re-ordering a data signal for streaming over a transmission channel from a server to a client for playback at the client, the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client, the primary and secondary data units being ordered in the data signal according to an original data unit order, the re-ordering device being arranged to change the order the primary and secondary data units in the sequence of data units by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client in time to be played back at its scheduled playback time during streaming playback at the client.

166. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to:

- calculate a buffering time required at the client for full quality streaming playback of the data signal at the client when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a full transmission rate equal to the average bit-rate of the data signal;
- calculate a buffering time required at the client for reduced quality streaming playback of the data signal at the client, when the data units are streamed over the transmission channel from the server to the client in the original data unit order at a reduced transmission rate less than the average bit-rate of the data signal;

- shift the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units, so that where a primary data unit is preceded by a secondary data unit in the sequence of data units, the positions of the primary and secondary data units are exchanged, thereby producing a re-ordered data signal with a modified data unit order different from the original data unit order;
- re-calculate the buffering time required at the client for full quality streaming playback of the data signal assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- re-calculate the buffering time for reduced quality playback of the data signal at the client assuming the data units are streamed over the transmission channel from the server to the client in the modified data unit order;
- repeat the step of shifting the position of each primary data unit in the sequence of data units towards the beginning of the sequence of data units and the steps of re-calculating the buffering times required for full and reduced quality streaming playback at the client until the buffering time required for full quality streaming playback of the data signal at the client is greater than or equal to the buffering time for reduced quality streaming playback of the data signal at the client.

167. (New) A re-ordering device according to claim 166, wherein the re-ordering device is arranged to calculate the buffering time for full quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to the average bit-rate of the data signal;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to played back at its scheduled playback time;

- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

168. (New) A re-ordering device according to claim 166, wherein the re-ordering device is arranged to calculate the buffering time for reduced quality streaming playback of the data signal at the client by:

- determining a time by which a first data unit of the data signal will be ready for playback at the client assuming that the transmission channel has a constant transmission rate equal to an average bit-rate for the primary data units plus a certain percentage of an average bit-rate for the secondary data units;
- comparing the time when the first data unit will be ready for playback at the client with the scheduled playback time of the first data unit to determine whether the first data unit will be received at the client in time to be played back at its scheduled playback time;
- if the first data unit will be received at the client too late to be played back at its scheduled playback time, increasing the buffering time so that the first data unit should be received in time; and
- repeating the aforementioned steps for each data unit of the data signal.

169. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to estimate an expected reduced channel transmission rate in advance.

170. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to estimate an expected reduced channel transmission rate based on statistics obtained from the behaviour of the transmission channel.

171. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to re-order the data signal to produce re-ordered data signals for several alternative transmission rates.

172. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to adjust the sequence of data units dynamically whilst transmission is occurring.

173. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to re-order the data units of a data signal for transmission over a transmission channel having a data transmission bandwidth that would otherwise be insufficient for transmitting the data signal.

174. (New) A re-ordering device according to claim 165, wherein the re-ordering device is arranged to re-order the data units of a data signal for streaming over a transmission channel so as to make a certain portion of an available bandwidth available for transmission of other data.

175. (New) A client device for receiving a data signal for streaming playback at the client device, the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client device, an order of the primary and secondary data units in the sequence of data units having been changed with respect to an original data unit order by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the

primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client device in time to be played back at its scheduled playback time during streaming, the client device being arranged to receive the primary and secondary data units in the modified data unit order and to return the primary and secondary data units to the original data unit order.

176. (New) A method of receiving a data signal for streaming playback, the data signal comprising a sequence of data units including primary data units and secondary data units, the primary and secondary data units having a scheduled playback time for streaming playback at the client device, an order of the primary and secondary data units in the sequence of data units having been changed with respect to an original data unit order by exchanging a secondary data unit that precedes a primary data unit in the original data unit order with the primary data unit so as to produce a re-ordered data signal with a modified data unit order in which the primary data unit precedes the secondary data unit in the sequence of data units, thereby increasing the likelihood that the primary data unit will be received at the client device in time to be played back at its scheduled playback time during streaming, the method comprising receiving the primary and secondary data units in the modified data unit order and returning the primary and secondary data units to the original data unit order.